

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

| | | | |
|--|---|---|------------------|
| Applicant's or agent's file reference G204052 | FOR FURTHER ACTION | | See item 4 below |
| International application No. PCT/JP2004/016124 | International filing date (<i>day/month/year</i>) 29 October 2004 (29.10.2004) | Priority date (<i>day/month/year</i>) 31 October 2003 (31.10.2003) | |
| International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237 | | | |
| Applicant ZEON CORPORATION | | | |

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis.2).

| | |
|---|--|
| The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70 | Date of issuance of this report 24 July 2006 (24.07.2006) |
| | Authorized officer Yoshiko Kuwahara e-mail: p07@wipo.int |

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

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| To: |
|-----|

Date of mailing
(day/month/year)

Applicant's or agent's file reference

G204052

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2004/016124

International filing date (day/month/year)

29.10.2004

Priority date (day/month/year)

31.10.2003

International Patent Classification (IPC) or both national classification and IPC

Applicant

ZEON CORPORATION

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 60.1b(ii) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/016124

Box No. 1

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐

This opinion has been established on the basis of a translation from the original language into the following language

....., which is the language of a translation furnished for the purposes of international search under Rule 12.3 and 23.1(b).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐

a sequence listing

☐

table(s) related to the sequence listing

b. format of material

☐

in written format

☐

in computer readable form

c. time of filing/furnishing

☐

contained in the international application as filed.

☐

filed together with the international application in computer readable form.

☐

furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comment(s):

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/016124

Box No. A Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|--------------------|-----|
| Novelty (N) | Claims <u>1-13</u> | YES |
| | Claims _____ | NO |
| Inventive step (IS) | Claims <u>1-13</u> | YES |
| | Claims _____ | NO |
| Industrial applicability (IA) | Claims <u>1-13</u> | YES |
| | Claims _____ | NO |

2. Citations and explanations:

Document 1: EP 1245630 A1 (The Yokohama Rubber Co., Ltd.), 02 October 2002

Document 2: US 2001/51685 A1 (Bayer Corporation), 13 December 2001

Claims 1-11

The inventions described in claims 1-11 have an inventive step over documents 1 and 2 cited in the ISR.

Documents 1 and 2 do not describe a conjugated diene based rubber composition containing a mixture of a conjugated diene based rubber-silica mixture (A) obtained by solidifying an aqueous dispersion or solution of a conjugated diene based rubber having (a) a glass transition temperature of -120 to 0°C, and a conjugated diene based rubber (b) having a glass transition temperature being different from that of the above conjugated diene based rubber (a) by an absolute value of 3 to 100°C. On the other hand, the invention of the present application demonstrates favorable effects of a balance in high degree of low fuel consumption, wet grip characteristics, mechanical strength, abrasion resistance, and low temperature impact resistance.

Claim 12

The invention described in claim 12 appears to involve an inventive step over documents 1 and 2 cited in the ISR.

Documents 1 and 2 do not describe that a formed article is formed by cross-linking a conjugated diene based rubber composition containing a mixture of a conjugated diene based rubber-silica mixture (A) obtained by solidifying an aqueous dispersion or solution of a conjugated diene based rubber having (a) a glass transition temperature of -120 to 0°C, and a conjugated diene based rubber (b) having a glass transition temperature being different from that of the above conjugated diene based rubber (a) by an absolute value of 3 to 100°C. On the other hand, the invention of the present application demonstrates favorable effects of a balance in high degree of low fuel consumption, wet grip characteristics, mechanical strength, abrasion resistance, and low temperature impact resistance.

Claim 13

The invention described in claim 13 appears to involve an inventive step based on documents 1 and 2 cited in the ISR.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient,

Continuation of:

Documents 1 and 2 do not describe solidifying an aqueous dispersion or solution of a conjugated diene based rubber having (a) a glass transition temperature of -120 to 0°C and a silica aqueous solution to obtain a conjugated diene based rubber composition (A), and mixing the a conjugated diene based rubber composition (A) with a conjugated diene based rubber (b) having a glass transition temperature being different from that of the above conjugated diene based rubber (a) by an absolute value of 3 to 100°C . On the other hand, the invention of the present application demonstrates favorable effects of a balance in high degree of low fuel consumption, wet grip characteristics, mechanical strength, abrasion resistance, and low temperature impact resistance.